WISCONSIN DIVISION OF PUBLIC HEALTH
Department of Health and Family Services

Meningococcal Disease

(meningococcal meningitis, meningococcemia)

Disease Fact Sheet Series

What is meningococcal disease?

Meningococcal disease includes meningococcal meningitis and meningococcemia. Meningococcal meningitis is a severe form of meningitis (inflammation of the meninges, the tissues that cover the brain and spinal cord) caused by the bacterium *Neisseria meningitidis*. Meningococcemia is an infection of the blood with *Neisseria meningitidis*. A person may have either meningococcal meningitis or meningococcemia, or both at the same time.

What are the symptoms?

The signs and symptoms of meningococcal disease can vary widely, but include sudden onset of high fever, headache, vomiting, stiff neck and a rash. Sensitivity to light, sleepiness and confusion may also occur. Symptoms may be difficult to detect in infants and the infant may only appear lethargic, irritable, have vomiting, or be feeding poorly. As the disease progresses, patients of any age may have seizures. Meningococcal disease is fatal in 8-15% of cases.

How soon do the symptoms appear?

The symptoms may develop rapidly, sometimes in a matter of hours, but usually over the course of 1-2 days. In some cases, death may occur within hours of the onset of symptoms. The symptoms may appear anytime between 2 and 10 days after *exposure*, but usually within 3 to 4 days.

Who gets meningococcal disease?

N. meningitidis bacteria are commonly found in the nose and throat without ever causing disease. Nationally, it is estimated that 5-10% of the population is carrying the bacterium at any given time. Most people exposed to *N. meningitidis* do not become ill. It is not well understood why only a few people develop invasive illness, but may be influenced by genetic, immune (e.g., preceding viral illness, immune compromised), societal (e.g., overcrowding, smoke exposure) or physical factors making them more susceptible to disease.

Anyone can get meningococcal disease, but it is most common in children under 5. Compared to other persons their age, college freshmen, especially those that live in dormitories, are at a slightly increased risk for meningococcal disease.

How are the bacteria that cause meningococcal disease spread?

The meningococcus bacteria are spread by direct contact with respiratory and oral secretions (saliva, sputum or nasal mucus) of an infected person.

When and for how long is an infected person able to spread the disease?
A person with meningococcal disease may transmit the disease beginning several days before he/she becomes ill, until the bacteria are no longer present in discharges from the nose and throat. Patients should be excluded from school, daycare or the work place until at least 24 hours after therapy was begun and the illness has subsided.

What is the treatment for meningococcal disease?
Meningococcal disease can be treated with a number of effective antibiotics. Persons who have been in close, direct contact with a patient with meningococcal disease may need to take antibiotics such as rifampin, ciprofloxacin or ceftriaxone as a preventive measure to eliminate the bacteria that they may be carrying in their throat.

Should people who have been in contact with a person with a diagnosed case of meningococcal disease be treated?
Only people who have been in close, direct contact need to be considered for preventive treatment. Close contacts include household members, intimate contacts, persons performing mouth to mouth resuscitation or endotracheal intubation, day care center classmates, or anyone directly exposed to the patient's oral or nasal secretions (e.g., kissing, sharing eating utensils or beverage containers). Direct contacts are usually advised to take preventive antibiotics. Close contacts should be alerted to watch for early signs of illness, especially fever, and seek treatment promptly.

Casual contact that might occur in a classroom, office or work setting is not usually significant enough to warrant antibiotic treatment.

Is there a vaccine to prevent meningococcal disease?
There are two vaccines (Menomune®, Menactra™) that will protect against four of the types of meningococcus, including 2 of the 3 types most common in the U.S. (serogroup C, Y, and W-135) and a type that causes epidemics in Africa (serogroup A). Meningococcal vaccines cannot prevent all types of the disease (neither protect against type B). The vaccine is recommended in some outbreak situations or for travelers to areas of the world where high rates of the disease are known to occur. College freshman living in dormitories should consider receiving the vaccine due to their slightly elevated risk of acquiring the disease.

In 2005, the Advisory Committee on Immunization Practices (ACIP) recommended that children receive the new meningococcal vaccine (Menactra™) at their routine 11-12 year old doctor's visit and that for the next two to three years, teens entering high school should also be vaccinated.